

**What is claimed is:**

1        1. A computerized method for authenticating an electronic transaction between a  
2 user and a computer, the computer being configured to conduct electronic transactions, the  
3 method comprising:

4            receiving a computer-generated transaction identifier from the computer via an  
5 electronic data link;

6            receiving a user-spoken transaction identifier and a user-spoken verification  
7 identifier transmitted by the user via a voice connection;

8            comparing the user-spoken transaction identifier with the computer transaction  
9 identifier;

10          comparing the user-spoken verification identifier with a voice print of the user; and

11           transmitting an authentication message to the computer if the user-spoken transaction  
12 identifier matches the computer-generated transaction identifier and if the user-spoken  
13 verification identifier matches the voice print.

1        2. The method of claim 1, wherein the computer transaction identifier is generated  
2 by the computer in response to the electronic transaction conducted between the user and the  
3 computer.

1        3. The method of claim 1, further comprising the step of providing the user voice  
2 print and user payment information prior to the electronic transaction.

1       4. The method of claim 3, wherein the user voice print is provided by the user by  
2       providing a spoken telephone number to a voice recognition unit.

1       5. The method of claim 3, wherein the user voice print is provided by the user by  
2       providing a spoken user name to a voice recognition unit.

1       6. The method of claim 3, wherein the user payment information includes a credit  
2       card number and an associated credit card expiration date.

1       7. The method of claim 1, wherein the step of receiving a user-spoken transaction  
2       identifier and the step of receiving a user-spoken verification identifier must be performed  
3       within a predetermined time from completing the electronic transaction.

1       8. The method of claim 7, wherein the predetermined time is about five minutes.

1       9. The method of claim 1, wherein the electronic data link includes the Internet.

1       10. The method of claim 1, wherein the electronic data link includes a private  
2       network.

1       11. The method of claim 1, wherein the computer is a system component of a  
2       financial institution.

1           12. The method of claim 11, wherein the financial institution is a bank.

1           13. The method of claim 12, wherein the user conducts the electronic transaction  
2         using an ATM machine.

1           14. The method of claim 12, wherein the user conducts the electronic transaction by  
2         communicating with a bank teller.

1           15. The method of claim 1, wherein the user conducts the electronic transaction  
2         using a personal computer.

1           16. The method of claim 1, wherein the user conducts the electronic transaction  
2         using a wireless device.

1           17. The method of claim 1, wherein the user conducts the electronic transaction  
2         using a hand-held device.

1           18. The method of claim 1, wherein the computer is a system component of an  
2         Internet web-site.

1           19. The method of claim 18, further comprising:  
2         receiving at least one user-spoken command for controlling web-site navigation, the  
3         at least one user-spoken command being transmitted by the user via a telephonic voice

4 connection;

5 converting the at least one user-spoken command into at least one computer-readable

6 command;

7 transmitting the at least one computer readable command to the computer; and

8 executing the at least one computer readable command, using the computer, whereby

9 the user controls web-site navigation of the Internet web-site by voice command via the

10 telephonic voice connection.

1 20. The method of claim 19, wherein the user is prompted by a voice menu system

2 to respond to voice menu options when transmitting the at least one user-spoken command.

1 21. The method of claim 1, further comprising:

2 providing at least one voice menu option to the user;

3 processing at least one user-spoken response to the at least one voice menu option, whereby

4 the at least one user-spoken response is transformed into at least one computer-readable

5 response;

6 transmitting the at least one computer-readable response to the computer; and

7 executing the at least one computer response, using the computer, whereby the user

8 controls the computer by voice command.

1 22. The method of claim 1, wherein the user-spoken transaction identifier and the

2 user-spoken verification identifier are transmitted by a telephonic voice connection.

1           23. The method of claim 1, wherein the electronic transaction includes an on-line  
2       purchase of goods or services.

1           24. The method of claim 1, wherein the electronic transaction includes a banking  
2       transaction.

1           25. The method of claim 1, wherein the electronic transaction includes downloading  
2       music files.

1           26. The method of claim 1, wherein the electronic transaction includes a  
2       point-of-sale transaction.

1           ✓ 27. A system for authenticating an electronic transaction between a first  
2       user-operated device and a computer, the computer being configured to conduct electronic  
3       transactions, the system comprising:

4           a voice browser configured to receive and process user-spoken information when  
5       coupled to a second user-operated device, the voice browser being programmed to compare

6       a user-spoken transaction identifier to a computer-generated transaction identifier, and to  
7       compare a user-spoken verification identifier to a voice print of the user; and

8           a session correlator coupled to the voice browser, the session correlator being  
9       configured to transmit an authentication message to the computer if the user-spoken

10      transaction identifier matches the computer transaction identifier, and if the user-spoken  
11     verification identifier matches the voice print.

1        28. The system of claim 27, wherein the voice browser further comprises:  
2              a voice recognition unit coupled to the second user-operated device via a network,  
3        the voice recognition unit being configured to recognize audible tones transmitted over the  
4        network; and  
5              a database coupled to the voice recognition unit, the database being configured to  
6        store the voice print of the user and payment information associated with the voice print.

1        29. The system of claim 28, wherein the voice recognition unit recognizes both  
2        spoken input and DTMF input.

1        30. The system of claim 28, further comprising a telephony interface unit coupled to  
2        the voice recognition unit, the telephony interface unit being configured to convert signals  
3        carried by the network into signals having a correct format and amplitude.

1        31. The system of claim 27, wherein the voice browser further comprises a voice  
2        menu system, the voice menu system comprising:  
3              a voice menu option library having stored therein at least one voice menu option;  
4              a user interface transmitter configured to transmit the at least one voice menu option  
5        to the user, the user interface transmitter including a synthesized speech unit for generating  
6        the at least one voice menu option, and a digitized audio unit for generating user-audible  
7        signaling tones; and  
8              a user interface receiver configured to recognize a plurality of user-spoken menu

9 selections provided by the user in response to the at least one voice menu option.

1           32. The system of claim 27, wherein the voice browser includes a digital signal  
2         processor.

1           33. The system of claim 27, wherein the voice browser includes at least one software  
2         module resident in an Internet backbone.

1           34. The system of claim 27, wherein the voice browser includes at least one software  
2         module resident in a telecommunications switch.

1           35. The system of claim 27, wherein the voice browser includes at least one software  
2         module resident in a computer disposed in a network data center.

1           36. The system of claim 27, wherein the voice browser includes at least one software  
2         module resident in a computer disposed in a customer premise equipment.

1           37. The system of claim 27, wherein the voice browser includes at least one software  
2         module resident in a computer disposed in an intranet.

1           38. The system of claim 27, wherein the session correlator includes at least one  
2         software module resident in an Internet backbone.

1           39. The system of claim 27, wherein the session correlator includes at least one  
2        software module resident in a telecommunications switch.

1           40. The system of claim 27, wherein the session correlator includes at least one  
2        software module resident in a computer disposed in a network data center.

1           41. The system of claim 27, wherein the session correlator includes at least one  
2        software module resident in a computer disposed in a customer premise equipment.

1           42. The system of claim 27, wherein the session correlator includes at least one  
2        software module resident in a computer disposed in an intranet.

1           43. The system of claim 27, wherein the second user-operated device includes a  
2        microphone.

1           44. The system of claim 27, wherein the second user-operated device includes a  
2        telephone set.

1           45. The system of claim 44, wherein the telephone set is a wireless telephone.

1           46. The system of claim 45, wherein the wireless telephone is configured to use a  
2        wireless access protocol.

1       47. The system of claim 27, wherein the computer transaction identifier is generated  
2       by the computer in response to the electronic transaction conducted between the user and the  
3       computer.

1       48. The system of claim 27, wherein the electronic data link includes the Internet.

1       49. The system of claim 27, wherein the electronic data link includes a private  
2       network.

1       50. The system of claim 27, wherein the computer is a system component of a  
2       financial institution.

1       51. The system of claim 50, wherein the financial institution is a bank.

1       52. The system of claim 51, wherein the first user-operated device includes an ATM  
2       machine.

1       53. The system of claim 51, wherein the user conducts the electronic transaction by  
2       communicating with a bank teller.

1       54. The system of claim 27, wherein the first user-operated device includes a  
2       personal computer.

1           55. The system of claim 27, wherein the first user-operated device includes a  
2 wireless device.

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4           56. The system of claim 27, wherein the first user-operated device includes a  
5 hand-held device.

1           57. The system of claim 27, wherein the computer is a system component of an  
2 Internet web-site.

1           58. The system of claim 27, further comprising:  
2            a user authentication input unit coupled to the first user-operated device and the  
3 session correlator, the user authentication unit being configured to accept a user name and a  
4 user password from the user;  
5            a database coupled to the user authentication input unit, the database being  
6 configured to store an authentic user name and an authentic user password; and  
7            a user authenticator coupled to the user authentication input unit, the database, and  
8 the session correlator, the user authenticator being programmed to compare the user name to  
9 the authentic user name, and to compare the user password to the authentic user password,  
10 whereby the user authenticator provides the session correlator with a transaction denial  
11 message if the user name does not match the authentic user name, or the user password does  
12 not match the authentic user password.

1           59. The system of claim 27, wherein the electronic transaction includes an on-line  
2       purchase of goods or services.

1           60. The system of claim 27, wherein the electronic transaction includes a banking  
2       transaction.

1           61. The system of claim 27, wherein the electronic transaction includes downloading  
2       music files.

1           62. The system of claim 27, wherein the electronic transaction includes a  
2       point-of-sale transaction.

1           ✓ 63. A computerized voice verification method for authenticating an electronic  
2       transaction between a user and a computer, the computer being configured to conduct  
3       electronic transactions, the method comprising:

4           enrolling the user in a voice verification system, whereby the user provides the  
5       system with a user voice print;

6           performing the electronic transaction;

7           receiving a transaction identifier from the computer via an electronic data link in  
8       response to performing the electronic transaction;

9           receiving a user-spoken transaction identifier and a user-spoken verification  
10      identifier transmitted by the user via a voice connection;

11          comparing the user-spoken transaction identifier with the computer transaction

12 identifier and the user-spoken verification identifier with a voice print of the user; and  
13 transmitting an authentication message to the computer if the user-spoken transaction  
14 identifier matches the computer transaction identifier, and if the user-spoken verification  
15 identifier matches the voice print.

1 64. The method of claim 63, wherein a transaction denied message is transmitted to  
2 the computer if the user-spoken transaction identifier does not match the computer  
3 transaction identifier, or if the user-spoken verification identifier does not match the voice  
4 print.

1 65. A computerized method for controlling web-site navigation, the method  
2 comprising:  
3 providing an authentication system including a voice recognition unit and a session  
4 correlator, the voice recognition unit having access to a pre-registered voice print of the user,  
5 whereby the authentication system is coupled to a user computer and a web-site during the  
6 computerized method;  
7 conducting a transaction between the user computer and the web-site, the web-site  
8 transmitting a transaction identifier to the user computer and the authentication system in  
9 response to the transaction;  
10 receiving a user-spoken transaction identifier and a user-spoken verification  
11 identifier via a telephonic connection, the authentication system being programmed to  
12 compare the user-spoken transaction identifier to the transaction identifier and the  
13 user-spoken verification identifier to the pre-registered voice print;  
14 transmitting an authentication message to the web-site if the user-spoken transaction  
15 identifier matches the transaction identifier and if the user-spoken verification identifier

16 matches the voice print;  
17 receiving at least one user-spoken command for controlling web-site navigation, the  
18 authentication system being programmed to convert the at least one user-spoken command  
19 into at least one computer-readable command; and  
20 transmitting the at least one computer readable command to the web-site, the at least  
21 one computer readable command being executed by the web-site, whereby the user controls  
22 web-site navigation of the web-site by the at least one user-spoken command.

1 66. The method of claim 65, wherein the at least one user-spoken command includes  
2 a plurality of user-spoken commands.

1 67. The method of claim 65, wherein the plurality of user-spoken commands are  
2 transmitted by the user in response to a plurality of voice menu options provided by the  
3 authentication unit.

1 68. The method of claim 65, wherein a web-navigation is denied message is  
2 transmitted to the computer if the user-spoken transaction identifier does not match the  
3 computer transaction identifier, or if the user-spoken verification identifier does not match  
4 the voice print.